

## Claims

What Is Claimed Is:


- Sub. A1 B1
1. A method of transmitting data in a digital communication system between a transmitting station and a receiving station, said transmitting method comprising:
    - a) transmitting a broad band signal from a transmitting station to a plurality of receivers, wherein said broad band signal contains a plurality of information signals intended for specific receivers.
    - b) transmitting an index signal from said transceiver station to said plurality of receivers, wherein said index signal contains index information for selecting information signals in said primary data signal;
    - c) receiving and decoding said index signal at a receiving station;
    - d) selecting, at said receiving station, one or more information signals in said primary data signal based on index information extracted from said index signal;
    - e) decoding the selected information signals in said primary data signal at said receiving station.
  2. The method of claim 1 wherein said index signal is a narrow-band signal.
  3. ~~The method of claim 1 wherein the index signal is transmitted at the same rate as the information signal.~~
  4. ~~The method of claim 1 where the receiving means demodulates and decodes the first index data signal in real-time.~~

5. The method of claim 1 wherein the primary data signal is temporarily buffered by the receiver for later demodulation and decoding.
6. The method of claim 1 wherein the index signal includes a plurality of packets, each packet in said index signal including an identification field containing information for identifying a particular receiver and a packet identification field for identifying corresponding packets in said primary data signal.
7. The method of claim 1 wherein the packets in the index signal correspond to the packets in the primary data signal.

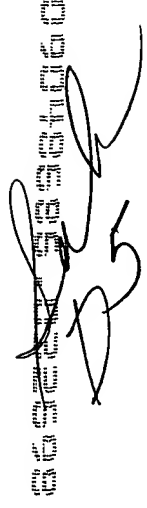
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8. A method of transmitting data in a digital communication system between a transmitting station and a receiving station, said transmitting method comprising:
    - a) transmitting an information signal from said transmitting station to a relay station, wherein said information signal contains a series of discrete data packets;
    - b) extracting index information from said information signal at said relay station;
    - c) re-transmitting said information signal from said transmitting station to a plurality of receivers;
    - d) transmitting an index signal from said transmitting station to said plurality of receivers, wherein said index signal contains said index information extracted from information signal for selecting data packets in said broad band signal;
    - e) receiving and decoding said index signal at a receiving station;
    - f) selecting, at said receiving station, one or more data packets in said information signal based on index information extracted from said index signal;

g) decoding the selected data packets in said information signal at said receiving ~~station.~~

9. The method of claim 8 wherein said information signal is a broadband signal.

 ~~10. The method of claim 8 where the information signal is transmitted at a rate of variable bit rates from 2 Mbps to 64 Mbps.~~

11. The method of claim 8 wherein said index signal is a narrow-band signal.

 ~~12. The method of claim 8 wherein the index signal is transmitted at the same rate of the information signal.~~

13. The method of claim 8 where the receiving means demodulates and decodes the first index data signal in real-time.

14. The method of claim 8 wherein the information signal is temporarily buffered by the receiver for later demodulation and decoding.

15. The method of claim 8 wherein the index signal includes a plurality of packets, each packet in said index signal including an identification field containing information for identifying a particular receiver and a packet identification field for identifying corresponding packet(s) start time in said information signal.

16. The method of claim 8 wherein the packets in the index signal correspond to the ~~packets in the information signal.~~

~~17. A broadband communications system comprising:~~

a) a transmitting station including:

- i) first transmitting means for transmitting a broadband information signal to a plurality of receivers, wherein said broadband signal having a plurality of data packets each addressed to a selected receiver;
- ii) a second transmitting means for transmitting an index signal including addressing information for identifying the location of data packets in said broadband signal intended for a selected receiver and the start time of packet(s) in that receiver;

b) a plurality of receivers for receiving said information signal and said index signal, each receiver including:

- i) a first signal processing means for demodulating and decoding said index signal to extract said addressing information;
- ii) a second signal processing means for demodulating and decoding said information signal;
- iii) control means for selectively activating said second signal processing means based on addressing information in said index signal.

18. The communication system of claim 17 wherein said receiver further includes an input buffer for temporarily storing said information signal before demodulating and decoding said its own information signal.

~~19. A receiver for a broadband communication system comprising:~~

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c) ~~control means for selectively activating said second signal processing means~~  
~~based on addressing information in said index signal.~~

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